

REMARKS/ARGUMENTS

Claims 1-23 are pending.

Claims 1-9, 11-19, and 21-23 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 5,923,338 to Rich.

Claims 10 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,923,338 to Rich in view of U.S. Patent 6,057,852 to Krech, Jr

Reconsideration of the Office Action of August 28, 2003 is respectfully requested in view of this response.

Section 102(e) Rejections

Claims 1-9, 11-19, and 21-23 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 5,923,338 to Rich. For anticipation under 35 U.S.C. § 102(e), the reference must teach every aspect of the claimed invention either explicitly or impliedly. As discussed below, the cited reference neither expressly nor inherently teaches the features of the claimed invention. Additionally, the cited reference does not motivate any modification of its teaching to yield these features, and so a § 103 obviousness rejection would also be inappropriate.

For this reason, applicants respectfully disagree with, and traverse, the stated grounds for rejection. As described below, the claims recite various features that are neither taught nor suggested by the prior art. Applicants thus submit that all of the claims are novel and non-obvious over the prior art of record.

Below, applicants discuss various claim features that define over the prior art of record.

Claim 1

Claim 1 of the application, as previously amended, is directed to a method comprising the steps of:

“(a) reading a set of data into a set of graphics memory storage elements wherein one or more of a plurality of channels have been dedicated for data storage;

(b) identifying, for each graphics memory storage element in said set of graphics memory storage elements, an address wherein said identified address can comprise one or more dimensions;

(c) determining a set of specific data needed for at least one SIMD instruction;

(d) recalling each said identified address for each graphics memory storage element where specific data is stored; and

(e) using said recalled address to retrieve said specific data into another set of graphics memory storage elements wherein one or more of a plurality of channels have been dedicated for data storage.

While the examiner does not specifically point out which of the feature of the prior art the examiner finds to anticipate which feature of the claim, to the best of applicants' understanding, the examiner is analogizing the "set of graphics memory storage elements" as in claim 1 to the texels of Rich.

However, at least several elements of the claimed invention in claim 1 which are not anticipated by such an analogy of texels in Rich to the set of graphics memory storage elements in the claimed invention. First, no reading of a set of data into texels can be found in Rich. No identification of an address for each graphics memory storage element is found in Rich. While the examiner asserts that it is implicit in Rich that texels have been read into and assigned with addresses in texture maps, applicants respectfully disagree.

Additionally, the determination of a set of specific data needed for at least one SIMD instruction and the recalling of an identified address for each graphics memory storage element where specific data is stored is not found in Rich. In Rich, specific data stored in texels is not determined, and an address for that specific data recalled. Instead, in Rich, addresses for texels to be used are generated by using perspective transformation information together with texture mapping information to provide for each polygon coordinate values (u,v). (See Rich column 18, lines 50-55). Thus the steps of (c) determining a set of specific data needed and then (d) recalling each identified address for each graphics memory storage element where specific data is stored are not taught in Rich.

In addition, the step of using the recalled address to retrieve the specific data into another set of graphics memory storage elements is not found in Rich. To the extent that the address of a texel (which, in Rich, is generated and not recalled, see above) is used to specify

a texel or texels in Rich, the address is not used to retrieve the specific data into another set of graphics memory storage elements. While the examiner finds that “[t]he process of storing, retrieveing, performing instructions on texels based on their addresses is illustrated in Fig. 10”, this figure shows that a block of texel data may be transmitted to a processing element. See Rich, column 21, lines 61-65. This does not show that any texel data is retrieved into another set of graphics memory storage elements.

Claims 2-9 and 11-19

Similarly, in claim 2, similar claim limitations are not taught by Rich. Additionally, the additional limitations of retrieving specific data into selected frame buffer pixels is not taught by Rich. Because the applicants maintain that the elements of claim 2 are neither taught nor suggested by Rich, claims 3-9, which are dependent on claim 2, are similarly not taught or suggested by Rich.

Similarly, claim 11 include similar claim limitations to those described above with reference to claim 1, and claim 12 includes similar claim limitations to those described above with reference to claims 1 and 2. Thus, claims 11 and 12 contain elements that are neither taught nor suggested in Rich. Additionally, because applicants maintain that the elements of claim 12 are neither taught nor suggested by Rich, claims 13-19, which are dependent on claim 12, are similarly not taught or suggested by Rich.

In addition, in claims 8 and 18, the claim specifies that the data retrieved is stored in a frame buffer, and that the result of the SIMD instructions are stored in the same frame buffer pixels. Applicants respectfully disagree that storing the data for the SIMD instructions and the results of the SIMD instructions would be implicit in Rich. No suggestion of storing data being used in an instruction and data being generated by it is taught or suggested in Rich, and no implication is made in Rich that storage in the same frame buffer of data used and data generated is found in Rich.

Claims 21-23

In claim 21 of the application, as previously amended, is directed to a system comprising a texture memory, an address calculator, a frame buffer for storing an identified address into a selected set of pixels where one or more channels have beendedicated for

DOCKET NO.: MSFT-1085
Application No.: 09/638,907
Office Action Dated: August 28, 2003

PATENT

address storage, and a pixel-to-pixel communicator for using the stored addresses to retrieve data into that selected set of pixels where one or more channels have been dedicated for data storage. There is no teaching or suggestion in Rich of a set of pixels with a channel (or channels) for address storage and a channel (or channels) for data storage, as in claims 21 and 23. Nor is there a teaching or suggestion in Rich of a set of texels with a channel (or channels) for address storage and a channel (or channels) for data storage, as in claims 22.

Claims 10 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 5,923,338 to Rich in view of U.S. Patent 6,057,852 to Krech, Jr

Reconsideration of the Office Action of August 28, 2003 is respectfully requested in view of this response.

Section 103(a) Rejections

Claims 10 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 5,923,338 to Rich in view of U.S. Patent 6,057,852 to Krech, Jr

Claim 10 depends indirectly from claim 2, and claim 20 from claim 12. As described above, the features of the independent claims 2 and 12 are neither taught nor suggested by Rich. No teaching or suggestion of the absent claim elements as described above is found in Krech, Jr. For this reason, applicants respectfully disagree with, and traverse, the stated grounds for rejection.

Conclusion

Applicants thus submit that all of the claims 1-23 are novel and non-obvious over the prior art of record. For all of the foregoing reasons, applicants respectfully submit that this case is now in condition for allowance, and an early notice of allowance is earnestly solicited.

DOCKET NO.: MSFT-1085
Application No.: 09/638,907
Office Action Dated: August 28, 2003

Date: December 29, 2003

PATENT



Sharon Fenick
Registration No. 45,269

Woodcock Washburn LLP
One Liberty Place - 46th Floor
Philadelphia PA 19103
Telephone: (215) 568-3100
Facsimile: (215) 568-3439